

COMPANY SANITIZED

Building K1, Room 1A69
June 28, 1994

8EHQ-0794-130968
Non-Confidential Business Information

(A)

TSCA Document Receipt Center (TS-790)
Att: Section 8(e) Coordinator
Office of Pollution Prevention and Toxics
Environmental Protection Agency
401 M Street, SW
Washington, DC 20460

8EHQ-94-13096

48940000338

56 JUL -5 AM 8:21

RECEIVED

Re: Section 8(e) Notice

Gentlemen:

We wish to report under TSCA Section 8(e), a case report of respiratory effects after an acute exposure to . The exposure was to a chemist. He was producing the material by heating grams of , at about 295 °C. The reaction was being run in a laboratory exhaust hood. He monitored the reaction by periodically sampling the reaction flask contents with a Pasteur pipette, extracting the materials, and then transferring the pipette's contents into a vial. As he turned discard the pipette, he brought the vial closer to his face, exposing him to its emanating vapors.

Upon his exposure to the vapors, the chemist immediately noted a burning sensation in his chest. Over the next few days he noted chest pains whenever he coughed. He did however indicate that his coughing was not excessive. He characterized the pains as flu-like symptoms. About five days after his exposure, because of continued discomfort, he reported for a medical evaluation. The physician found normal pulmonary function test, normal chest exam, and no positive findings. During the time of his chest discomfort the chemist continued to routinely exercise at a fitness center, including doing vigorous aerobics. He was interviewed for this investigation in mid June (about three weeks after the exposure, and after his vacation), at which time his chest pains had ceased.

Of the components in the reaction flask, at the time of the chemist's exposure, 79% was , with traces of (less than 0.1%) which was the starting material. Also in the flask were byproducts of the reaction, which included 11% ; 6% being a mixture of the three isomers: ; 2% of ; 0.001 to 0.01% hydrogen chloride gas (CAS# 7647010); and 0.001 to 0.01% chlorine gas (CAS# 778250).

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8/1/94

(2)

Non-Confidential Business Information

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The exposure would have been for a second or two at most, since the sampling of the reaction vessel was being done in a laboratory exhaust hood, with a face velocity of 133 feet per minute, which would have quickly carried away the vapors. At the temperature at which the reaction was run, the components would all have had significant vapor pressures.

The irritant nature of _____ is not surprising. The exposure was however not to the pure material, as noted above, it was concomitant with other materials, most of which are known or suspected respiratory irritants. The respiratory irritant nature of the hydrogen chloride and chlorine are well known. _____ is also a known respiratory irritant and sensitizer, and based on structural analogy, we would suspect that the other byproducts of the reaction are also respiratory irritants.

Because _____ is a new chemical, and there appears to be no information on the toxicology on the material, we are submitting this report.

Sincerely yours,

Reinhard Sidor

Reinhard Sidor, Administrator
IH/Safety Programs

cc: Jane Magee

Triage of 8(e) Submissions

Date sent to triage: OCT 14 1994

NON-CAP

CAP

Submission number: 13096A

TSCA Inventory:

Y

N

D

Study type (circle appropriate):

Group 1 - Dick Clements (1 copy total)

ECO

AQUATO

Group 2 - Ernie Falke (1 copy total)

ATOX

SBTOX

SEN

w/NEUR

Group 3 - Elizabeth Margosches (1 copy each)

STOX

CTOX

EPI

RTOX

GTOX

STOX/ONCO

CTOX/ONCO

IMMUNO

CYTO

NEUR

Other (FATE, EXPO, MET, etc.): _____

Notes:

THIS IS THE ORIGINAL 8(e) SUBMISSION; PLEASE REFILE AFTER TRIAGE DATABASE ENTRY

For Contractor Use Only

entire document: 0 1 2 pages 1, 2 pages 1, 2

Notes:

Contractor reviewer: NEB Date: 9/7/94

CECATS DATA: Submission # BEHO 0794-13096 SEQ. ATYPE: IND SUPP FLWPSUBMITTER NAME: ConfidentialINFORMATION REQUESTED: FLWP DATE: 0501 NO INFO REQUESTED
0502 INFO REQUESTED (TECH)
0503 INFO REQUESTED (VOL ACTIONS)
0504 INFO REQUESTED (REPORTING RATIONALE)
DISPOSITION:
0505 REFER TO CHEMICAL SCREENING
0506 CAP NOTICEVOLUNTARY ACTIONS:
0401 NO ACTION REPORTED
0402 STUDIES PLANNED/IN PROGRESS
0403 NOTIFICATION OF WORKING RESULTS
0404 LABEL/MSDS CHANGES
0405 PROCESS/HANDLING CHANGES
0406 APP/PAUSE DISCONTINUED
0407 PRODUCTION DISCONTINUED
0408 CONFIDENTIALSUB DATE: 06/28/94 OTS DATE: 07/05/94 CSRAD DATE: 08/01/94

CHEMICAL NAME:

Misc Chemicals

CAS#

Confident778-25-0Pharmaceuticals7647-01-0

INFORMATION TYPE:

P F C

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P F C

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P F C

0201	ONCO (HUMAN)	01 02 04	0216	EPICU 1	01 02 04	0241	IMMUNO (ANIMAL)	01 02 04
0202	ONCO (ANIMAL)	01 02 04	0217	HUMAN EXPOS (PROD CONTAM)	01 02 04	0242	IMMUNO (HUMAN)	01 02 04
0203	CELL TRANS (IN VITRO)	01 02 04	0218	HUMAN EXPOS (ACCIDENTAL)	01 02 04	0243	CHEM/PHYS PROP	01 02 04
0204	MUTA (IN VITRO)	01 02 04	0219	HUMAN EXPOS (MONITORING)	01 02 04	0244	CLASTO (IN VITRO)	01 02 04
0205	MUTA (IN VIVO)	01 02 04	0220	ECOTOX TOX	01 02 04	0245	CLASTO (ANIMAL)	01 02 04
0206	REPRO/TERATO (HUMAN)	01 02 04	0221	ENV. OCCURENCE/FATE	01 02 04	0246	CLASTO (HUMAN)	01 02 04
0207	REPRO/TERATO (ANIMAL)	01 02 04	0222	EMER INCI OF ENV CONTAM	01 02 04	0247	DNA DAM/REPAIR	01 02 04
0208	NEURO (HUMAN)	01 02 04	0223	RESPONSE REQUEST DELAY	01 02 04	0248	PROD/USE/PROC	01 02 04
0209	NEURO (ANIMAL)	01 02 04	0224	PK/DOSE/PHARM ID	01 02 04	0251	MSDS	01 02 04
0210	ACUTE TOX. (HUMAN)	01 02 04	0225	REPORTING RATIONALE	01 02 04	0299	OTHER	01 02 04
0211	CHR. TOX. (HUMAN)	01 02 04	0226	CONFIDENTIAL	01 02 04			
0212	ACUTE TOX. (ANIMAL)	01 02 04	0227	ALLERG (HUMAN)	01 02 04			
0213	SUB ACUTE TOX (ANIMAL)	01 02 04	0228	ALLERG (ANIMAL)	01 02 04			
0214	SUB CHRONIC TOX (ANIMAL)	01 02 04	0229	METAB/PHARMACO (ANIMAL)	01 02 04			
0215	CHRONIC TOX (ANIMAL)	01 02 04	0240	METAB/PHARMACO (HUMAN)	01 02 04			

TRIAGE DATA: NON-CBI INVENTORY

ONGOING REVIEW

SPECIES

TOXICOLOGICAL CONCERN:

USE:

PRODUCTION:



YES (DROP/REFER)

Human

LOW

CAS SR

NO

NO (CONTINUE)

MED

DETERMINE

REFER:

HIGH

COMMENTS:

Non-Cap

EQMS Ratings on 8(E) NonCAP Submissions--Set 11--April 17, 1995

8E Number and Chemical Name	Rank	Reason or Brief Description
-13096A CBI Mixture including chlorine, HCl	Low	A company chemist was exposed for a very short time to a flask of the undisclosed mixture and experienced a burning sensation in the chest consistent with a chlorine reaction. He was reported to have flu-like symptoms for several days following the incident.
-13103A 1,3-butadiene	High	<p>NIOSH conducted a standard cohort mortality study of 364 chemical workers engaged in 1,3-butadiene refining at 3 plants in Kanawha, WV. The copy submitted was a review draft received in mid 1994 by the subject employer. When the results have been finalized, NIOSH plans publication; the final version will appear in Environmental Health Perspectives in 1995. There were 168 deaths available for analysis. The draft study results included significantly elevated SMRs for lymphosarcoma and reticulosarcoma combined among butadiene workers using county as well as U.S. reference rates. IARC lists butadiene as having "limited evidence of carcinogenicity." EPA classifies it as a probable human carcinogen.</p>

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